5 July 1955

MEMORANDUM FOR: SA/PC/DCI

SUBJECT : Characteristics of Project Equipment

1. The principal characteristics of the special aircraft are given in Tab A.

2. Over and above the equipment and instruments specified by the aircraft manufacturer (e.g. radio compass, radio, automatic pilot, altimeter, air speed indicator, clock, etc.), each operational aircraft will carry:

a. Special light weight electronics recorder capable of 9 hours of operation [redacted] 25X1

b. View finder and periscope with drift-meter capabilities

c. Charting camera for full track, horizon to horizon coverage as a basic data record for each mission and for library use. Each frame in this camera will carry a photograph of a vertical indicator and a clock set to GMT and synchronized with other equipment clocks in the aircraft

d. A sun-position camera with associated clock. This camera will periodically photograph simultaneously the sun and the entire horizon and provide basic position information for use with the charting camera record. It will permit reasonably accurate bridging of blanks due to cloud cover.

[redacted] 25X1

3. Photographic Equipment configurations are described in Tab B. Scale, coverage, number of exposures and other relevant data are given in Tab C.

[redacted] 25X1

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BRIEFING NOTES

Tab A gives a performance comparison of the aircraft for the J57-P-37 and J57-P-31 engines. In this connection, it is noted that on the P-31 performance, very preliminary data indicates a possible thrust of 700 lbs. at 70,000 ft. (445 knots and 100% ram) and a specific fuel consumption under the same conditions of 1.13. These numbers should be compared respectively with the 631 lb. thrust figure and the 1.146 figure for specific fuel consumption given in Tab A.

Tab B contains a brief description of the photographic equipment being provided. It is noted that Configuration A utilizes standard equipment which is being substantially reworked in order to improve the resolution obtainable (in some cases by as much as a factor of 6) and to provide better weight characteristics. This configuration is being procured in order to have proven equipments as soon as airplanes are available. Configuration B is designed to give full mission coverage at still better resolution than is possible with Configuration A. This configuration involves a new design of both camera and optical systems. Configuration C is used for high resolution telephoto coverage of specific targets with the 200" lens now planned. Distances of a few feet can be resolved from maximum altitudes. 25X1

[redacted]

HIM:mah
4 March 1955

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